



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,170	07/20/2001	Howard Taitel	MWS-041RCE	1865
74321 7590 04/02/2008 LAHIVE & COCKFIELD, LLP/THE MATHWORKS One Post Office Square Boston, MA 02109-2127				
EXAMINER				
ALAM, SHAHID AL				
ART UNIT		PAPER NUMBER		
2162				
MAIL DATE		DELIVERY MODE		
04/02/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/910,170

Applicant(s)

TAITEL, HOWARD

Examiner

Shahid Al Alam

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date: _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 43 – 51 are pending in this Office action.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 50 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application with useful, concrete and tangible result.

The claim 50 is rejected under 35 USC 101 for being "software per se".

The claimed invention as in claim 50 is addressed to "a computer program product reading on a computer readable medium having instructions stored thereon" that can be interpreted as referring to lines of programming within a computer system, rather than referring to the system as a physical object. The claimed invention is also addressed to "a model" and "**code**" that are not a hardware system or medium but is a software system or program (see instant disclosure pages 15 – 16). Accordingly, the claim becomes nothing more than sets of software instructions which are "software per se".

"Software per se" is non-statutory under 35 USC 101 because it is merely a set of instructions without any defined tangible output or tangible result being produced. The requirement for tangible result under 35 USC 101 is defined in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47USPQ2d 1596 (Fed. Cir. 1998).

As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 43, 50 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication Number 2003/0195729 issued to Jeffrey Kodosky et al. (hereinafter "729 reference").

With respect to claims 43, 50 and 51, "729 reference" teaches identifying portions of a model as being critical to a real-time execution of the model; identifying other

Art Unit: 2162

portions of the model as being non-critical to the real-time execution of the model; generating code for real-time execution based on the critical portions of the model (page 21, claim 36); and

transmitting the generated code for execution on a target (page 21, claims 31 and 32).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44 – 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication Number 2003/0195729 issued to Jeffrey Kodosky et al. (hereinafter “729 reference”) and in view of U.S. Patent Publication Number 2003/0196187 issued to Jeffrey Kodosky et al. (hereinafter “187 reference”).

With respect to claims 44 – 49, “729 reference” teaches claimed inventions substantially as claimed, however, “729 reference” does not explicitly teach non-critical portions are post-processing units; the post-processing units are logical units of the model that have no synchronized data outputs feeding non-post-processing sections of the model; establishing an inter-process communication link between the generated code and the non-critical portions of the model; receiving output from the generated

code via the inter-process communications link; executing the code on a target processor associated with the target and processing the output in the non-critical portions of the model as claimed.

The "187 reference" discloses the aforementioned limitations by executing subset of selections designated post processing unit sections (see page 14, claims 23 – 26).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the teachings of the "729 reference" with the "187 reference" because they are both directed to generation of hardware implementation of graphical code and are both in the same field of endeavor. One of ordinary skill in the art would have been motivated to do so because such modification would have allowed the "729 reference" to provide a seamless environment in which the user can develop an embedded application using high level programming technique (see Abstract of the "187 reference").

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shahid Al Alam/
Primary Examiner, Art Unit 2162

March 29, 2008